

PEG'S MAJOR FACTORS ON REDUCING LCOE

VS CONVENTIONAL SUBSTRUCTURES

PEG® is a revolutionary substructure whose unique advantages extend well beyond just CAPEX and have a significant impact on the overall LCOE (Levelized Cost of Energy). To help you factor these benefits into your calculations, we've outlined key areas where **PEG®** contributes to reducing the LCOE:



CAPEX

Thanks to reduced steel requirements, the material costs for PEG are substantially lower. The overall price of a PEG system can be further optimized based on factors such as ground clearance, module wattage class, and soil conditions. Material, logistics, and labor install costs are seen as high as 30-40% versus tracker and conventional FT systems.



LABOR COSTS

PEG is considerably faster to install compared to traditional systems. Experienced installers typically complete a PEG installation—including module assembly and DC cabling to the inverter—within approximately 500 man-hours. Additionally, PEG can be installed by low-skilled labor, reducing hourly wage costs and simplifying labor sourcing. PEG Drive, autonomous micro pile driving, is in development to be released in Q2 2025.



TIME-TO-GRID

With significantly faster installation times, PEG shortens the project timeline and accelerates grid connection, thereby reducing the duration of non-revenue-generating construction.



MACHINERY COSTS

PEG installation does not require heavy machinery. Across all soil types, machinery costs are approximately 90% lower. The system is designed to be installed with ease at waist height to be optimized to ergonomically, eliminating the need for cranes or specialized equipment. Minimum requirement for PEG installation is a hammer drill, crimping tool and a screw driver.



MECHANICAL ENGINEERING*

Jurchen Technology's scope of services includes layout and structural analysis, taking local conditions (weather, terrain) and the modules into account. It also includes the structural report.

*Note: at less than 5MWp the structural analysis is not included!



OPERATIONS & MAINTENANCE

PEG has no moving parts, meaning there is no mechanical O&M required. Regular cleaning and vegetation management are in line with industry norms for fixed-tilt structures.



CABLING

The high-density layout of PEG reduces the total cable length required by ~20-30%. All DC cabling can be routed above ground to avoid DC trenching, simplifying installation and further cutting down on labor and material costs.

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LAND USE

PEG requires significantly less land area. This reduces the cost of land acquisition or lease and opens opportunities for dual land use (e.g., agriculture). It also minimizes fencing and other perimeter security needs.



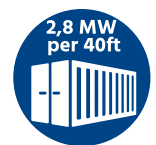
EARTHWORKS

Due to PEG's compact footprint and slope adaptability, the need for grading or major earthworks is often minimized or entirely eliminated.



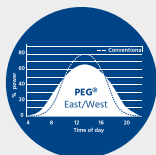
GROUNDING

The PEG system is inherently self-grounding, so additional grounding measures are typically unnecessary—though local regulations should always be observed.



TRANSPORTATION

The PEG substructure for approximately 2.8 MWp can fit into a single sea container (depending on the module wattage), greatly reducing transport costs. On-site logistics are simplified, and local sourcing is possible for some components.



YIELD POTENTIAL

While this overview focuses on CAPEX and related cost drivers, it's important not to overlook PEG's positive impact on the yield side—especially in applications involving BESS, hydrogen, time-of-use tariffs, or self-consumption models. The high energy yield per square meter can further improve project economics. For a more detailed yield analysis, please contact your local PEG representative.

